

Figure 1 illustrates the experimental setup. A participant is seated at a table, looking at a video screen. On the screen, a target (a small circle) is displayed. The participant's hand is positioned at a starting point (a larger circle). The distance between the starting point and the target is labeled as 'Distance'. The participant's hand is also labeled as 'Hand'.

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3. The transducer of claim 1, wherein the transducer I/O lead is configured to contact the integrated circuit I/O lead at a transducer surface substantially parallel to a mounting surface of the substrate.

1 4. The transducer of claim 1, wherein the transducer I/O lead is
2 configured to contact a pin I/O lead of the integrated circuit.

1 5. The transducer of claim 1, wherein the transducer I/O lead is
2 configured to contact a solder ball lead of the integrated circuit.

6. The transducer of claim 1, wherein the transducer I/O lead is configured to contact the integrated circuit I/O lead at a transducer surface adjacent to a mounting surface of the substrate.

1 7. The transducer of claim 1, further comprising a power input lead
2 connectable to a power line of the substrate.

1 8. The transducer of claim 1, further comprising a transductional
2 device.

1 9. The transducer of claim 1, wherein the transductional device is an
2 opto-electronic device.

1 10. The transducer of claim 1, wherein the transductional device is an
2 electronic device.

11. A method of connecting a transducer to an integrated circuit mounted on a substrate, comprising

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3 mounting the transducer to the substrate, and
4 contacting an input/output (I/O) lead of the transducer to an I/O lead of
5 the integrated circuit.

1 12. The method of claim 11, wherein the transducer I/O lead electrically
2 connects to the integrated circuit I/O lead independently of any electrically
3 conductive path of the substrate.

1 13. The method of claim 11, wherein the transducer I/O lead contacts
2 the integrated circuit I/O lead at a transducer surface substantially parallel to a
3 mounting surface of the substrate.

1 14. The method of claim 11, wherein the transducer I/O lead contacts a
2 pin I/O lead of the integrated circuit.

1 15. The method of claim 11, wherein the transducer I/O lead contacts a
2 solder ball lead of the integrated circuit.

1 16. The method of claim 11, wherein the transducer I/O lead contacts
2 the integrated circuit I/O lead at a transducer surface adjacent to a mounting
3 surface of the substrate.

1 17. The method of claim 11, wherein the transducer connects to a
2 power line of the substrate when the transducer is mounted to the substrate.

1 18. A system, comprising
2 a substrate,
3 an integrated circuit mounted on the substrate and having an input/output
4 (I/O) lead, and
5 a transducer having an I/O lead configured to contact the I/O lead of the
6 integrated circuit.

1 19. The system of claim 18, wherein the transducer I/O lead is
2 configured to electrically connect to the integrated circuit I/O lead independently
3 of any electrically conductive path of the substrate.